Mathematics – Y8 Assessment Descriptors

	Foundation	Developing	Securing	Exceeding	Excelling
Year 8 Autumn term	Confidently and independently be able to… • Use compass points to define directions. Classify types of angles. • Know and use basic units for metric measure. Estimate length, weight and capacity of familiar objects using metric units. • Use and interpret pictograms and bar charts. Calculate the median, mode and range of a set of data. • Order negative numbers in context. Calculate with negative numbers given in context. Know that calculations in brackets take priority over addition, subtraction, multiplication and division. • Classify polygons. Identify and name different types of angles. Know and use the angle sum of a triangle, on a straight line and that of angles at a point. Recognise parallel and perpendicular lines.	Confidently and independently be able to… • Measure lengths and angles accurately. Draw and measure distances using scales. • Use and understand ratio notation. Convert between metric units for length, weight and capacity. • Calculate the mean of a set of data. Choose appropriate measures of average for different data sets. • Use general rules given in words. Use BIDMAS correctly. Substitute negative and positive integers into simple expressions. • Measure and draw acute and obtuse angles accurately. Tessellate at least six simple regular shapes.	Confidently and independently be able to… • Create accurate scale drawings which include bearings. Identify and measure the correct bearing from word problems. • Use the unitary method to solve proportion problems. Express ratios in their simplest form. Divide into a given ratio. Use equivalent ratios to solve problems. • Make decisions based on given averages and range. Describe the relationship between variables. Draw accurate scatter diagrams. Solve problems involving averages. Understand the effect on the mean and median of altering the data. • Substitute negative and positive integers into expressions and unfamiliar formulae & answer questions given in context. • Calculate angles in isosceles triangles. Identify and use alternate and corresponding angles.	Confidently and independently be able to… • Calculate back bearings. Solve simple loci problems. Construct an angle bisector and the bisector of a line. • Understand and use links between fractions and ratios. Use efficient methods (multipliers) to solve proportion problems. • Understand correlation and be able to predict whether variables correlate. Find the mean and median of discrete data given in a table. Identify data outliers and interpret trends in spite of these. Estimate the mean from grouped data. • Substitute into complex unfamiliar formulae. Form expressions from problems and evaluate. Use substitution to solve equations by trial and improvement. • Find, calculate and use the exterior and interior angles of regular polygons. Tessellate at least six regular shapes.	Confidently and independently be able to… • Use loci to solve more complex multistep problems & loci problems which include bisectors. Understand equidistance. • Use graphs and set up equations to solve simple direct proportion problems. Apply proportion techniques to solve complex problems. • Anchor lines of best fit using the mean point on a scatter diagram, find its equation & use it to predict. Write conclusions from scatter diagrams. Use lines of best fit to interpolate data from scatter diagrams and know the limitations. Understand the problems of extrapolating. • Substitute into more complex unfamiliar formulae. Rearrange formulae. • Find, calculate and use the interior and exterior angles of any polygons. Solve problems (and give mathematical reasons) using properties of angles. Identify, and give reasons why, shapes will tessellate.